

# **Office of Fossil Energy**



## **Strategic Human Capital Management Plan**

**September 2004**

**11/17/2004 2:37 PM**

**TABLE OF CONTENTS**

## DRAFT

### FE GOAL

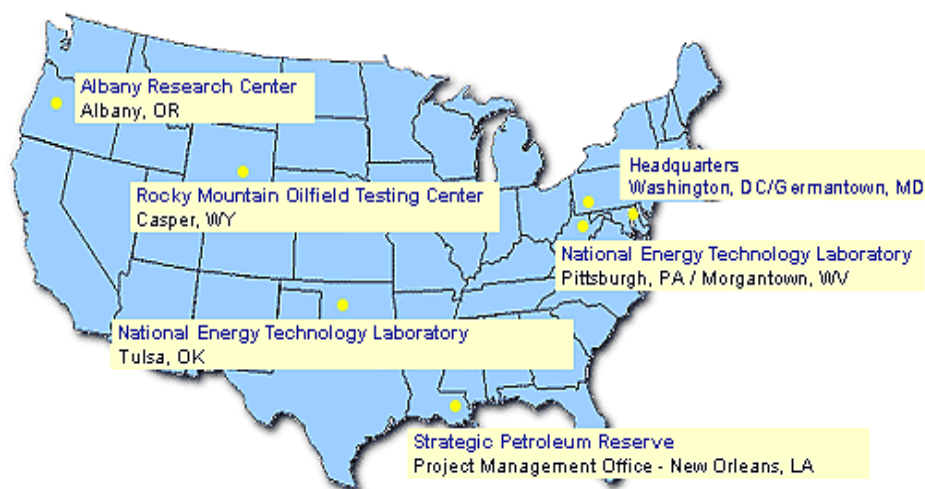
Fossil Energy (FE) will insure the adequate, efficient, and environmentally sound production, storage, and use of fossil fuels to meet our Nation's energy needs.

### FE HR VISION

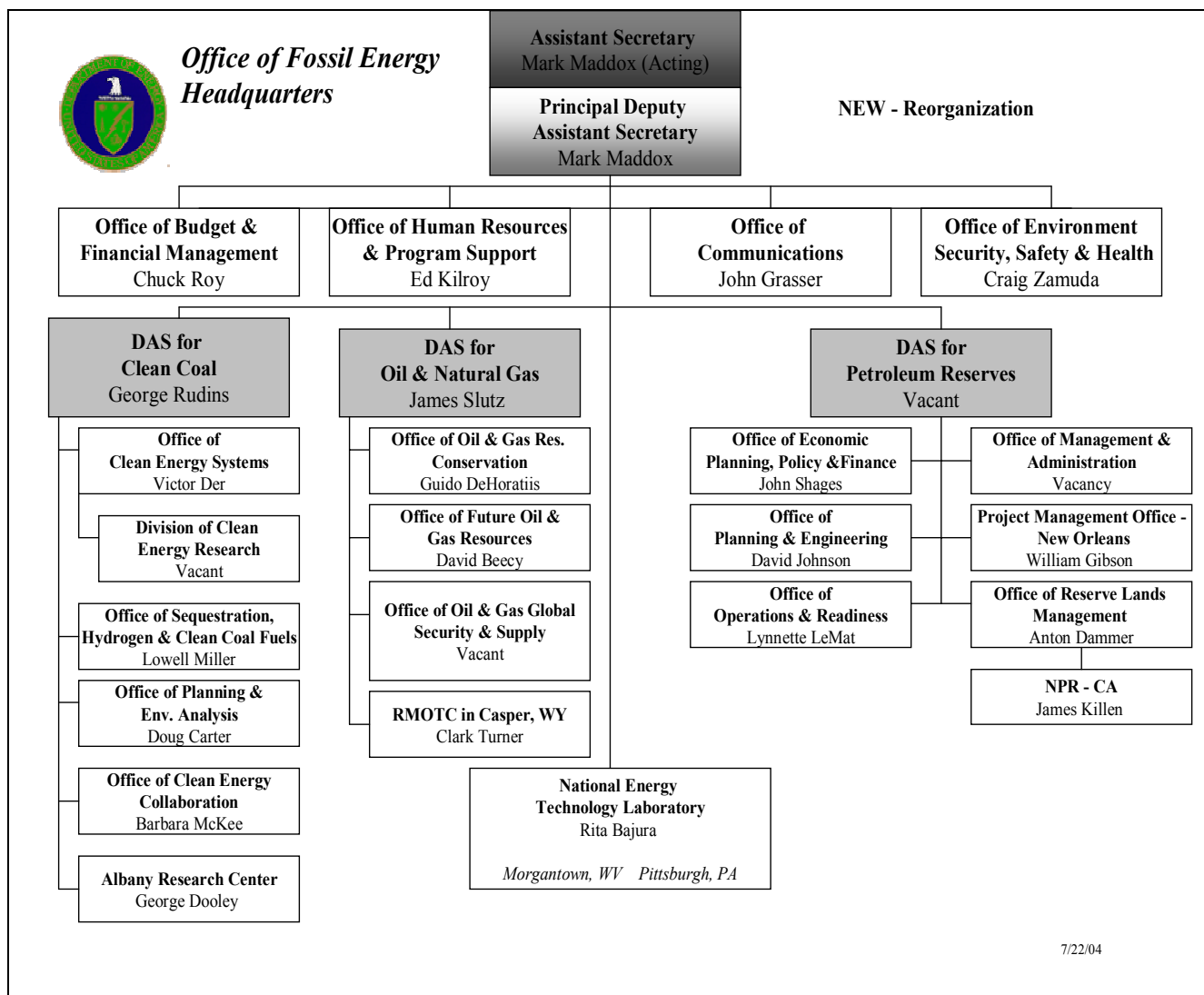
FE will build a powerful and diverse workforce to enable FE to successfully accomplish its long-term program goals and objectives. The workforce will be developed based on having the right people available at the right places at the right times.

### INTRODUCTION

The Office of Fossil Energy (FE) views its human capital resources as its most important asset. Without a highly qualified and motivated staff, the goals and objectives of the Department and FE could not be achieved. The FE human resource strategy is to build a powerful and diverse workforce that will facilitate the accomplishment of our program goals and objectives. Our vision is to have a vibrant forward-looking workforce. FE is striving to align our human capital management programs to our current and emerging mission and programmatic goals. To achieve this result, FE has developed long-term strategies for acquiring, developing and retaining staff that are critical to our programs' success. A diverse and skilled staff located throughout FE Headquarters and its field sites will assure our success at accomplishing our long term program goals and objectives. The goals and action plans contained in this strategic plan will be reviewed and updated annually.



**Figure 1: National Map Showing FE Locations**



**Figure 2: HQ/Field Organizational Chart**

## OFFICE OF FOSSIL ENERGY VISION STATEMENT

FE's mission is to enhance U.S. economic and energy security by: (1) managing energy-related research that maximizes the efficient and environmentally sound production and use of fossil fuels; (2) ensuring access to adequate supplies of affordable and clean FE; (3) maintaining strategic oil supplies to protect the U.S. against sudden and major interruptions in oil imports; and (4) maximizing the value of certain Government-owned oil and gas fields. FE manages three major programs in the Department: 1) FE Research, Development and Demonstration; (2) Strategic Petroleum Reserve; and (3) Naval Petroleum and Oil Shale Reserves. Currently, FE employees are both advanced in age (the average age is 50+) and top-heavy in senior management (GS 13s and above). FE intends to build a powerful workforce that will allow us to meet and exceed our FE goals. Our vision includes a younger, stronger, more technical and less administrative workforce that will be able to accomplish our long term goals and objectives. We will significantly increase our programs to hire entry level staff and will expand our recruitment at minority colleges and universities as well as at major "earth science" universities. Our vision also includes expanded training programs, particularly in contract and project management. Following the direction from the President's Management Agenda, FE conducted an in house top to bottom review that will result in a "re-engineering" of our work processes. This re-engineering will help us achieve our vision of reduced layers of technical and administrative management, a more streamlined decision making process, reduced redundant and unnecessary work in our systems, improved project and contract management capabilities, the implementation of clearer lines of authority and the out sourcing of activities that are commercial in nature.

Progress will be measurable in many areas:

1. The amount of de-layering accomplished
2. Results from Fair Act Inventories and A-76 studies
3. Reductions in the average age of FE staff
4. Reductions in the average grade of FE staff
5. Reduction in the percentages of under represented staff members
6. Number of entry-level technical staff hired
7. Number of training courses and employees taking project and contract management

Tools to realize our vision:

1. Use of buyouts/early outs to create headroom for entry-level hiring
2. Creation of "pipeline" universities to recruit top engineers/fossil energy scientists
3. Use of recruitment bonuses, retention allowances and student loan repayment options to attract and keep highly qualified and motivated staff
4. Redeployment and retraining of staff in mission critical areas
5. Strengthening of performance metrics
6. Reduce unnecessary management and administrative positions and reallocate

- resources to scientific, professional and technical functions
7. Expanded training to build stronger project and contract management skills
  8. Expanded use of DOE Career Intern Program to help address the diversity and the shortage of staff in under represented groups
  9. Expand use of summer intern programs to promote interest in Government employment, science and fossil energy technologies
  10. Provide guest speakers to “pipeline” and other universities
  11. Decentralize the decision making process where possible
  12. Establish clear lines of responsibility and authority
  13. Outsource activities that are commercial in nature

## **FE MISSION**

The mission of the Office of the Assistant Secretary for Fossil Energy (ASFE) is to enhance U.S. economic and energy security by: (1) managing and performing energy-related research that maximizes the efficient and environmentally sound production and use of fossil fuels; (2) supporting the development of policy options that benefit the U.S. public by ensuring access to adequate supplies of affordable and clean energy; (3) partnering with industry and others to advance clean and efficient FE technologies towards commercialization in the U.S. and international markets; (4) maintaining strategic crude and heating oil supplies to protect the U.S. against sudden and major supply interruptions and shortages; and (5) maximizing the value of certain Government-owned oil and gas fields.

## **FE's APPROACH TO HUMAN CAPITAL MANAGEMENT**

FE looks at human resource activities through six separate but important functions. These functions include strategic alignment, workforce planning and deployment, leadership and diversity, knowledge management, performance culture, and talent.

In each of these areas FE has considered the following factors in developing the goals and action plans associated with the six functions:

1. FE human resource/business vision statement
2. Appropriate FE human resource Standard Operating Procedures
3. Appropriate human resource policies
4. Performance metrics
5. Measurement of results
6. Making adjustments for continual improvement

## **MAJOR STRATEGIES AND ACTION PLANS**

### **STRATEGIC ALIGNMENT**

Strategic alignment is the positioning of essential organizational components and resources to achieve missions, goals, and objectives.

#### **GOAL:**

Within three years, FE's strategic, financial, workforce, and employee performance plans will be integrated and aligned to promote the accomplishment of the FE mission.

#### **CURRENT STATUS:**

FE is working to integrate all of their core planning, financial and workforce documents in order to strategically align all organizational components and resources necessary to execute FE's mission. FE's strategic plan incorporates four Government Performance Results Act (GPRA) plans that help define appropriate technical, financial, and workforce strategies. FE currently does not however have complete integration of our core program, financial and human resource documents, but recognizes that changes to the FE budgets and strategic plans also need to direct changes and adjustments to the FE strategic human capital management plan and the FE program plans. FE is currently working to directly relate annual budgets, strategic-GPRA plans, FE program plans, and the FE strategic human capital management plan. Efforts are being made to provide all managers with FE key strategic documents and to make them accountable for their implementation within their organizations.

#### **ACTION PLAN:**

#### **FISCAL YEAR**

Prepare FY 06 human resource budget supplemental data to define human resource strategies in the FY 06 budget	3 QR 04
Review and update FE Human Resource Vision Statement	4 QR 04 (Completed)
Develop FY 05 Human Resource Performance Metrics	1 QR 05
Conduct assessment of performance against the FY 04 FE strategic human capital management plan's metrics	1 QR 05



Review and align the FE Strategic Human Capital Management Plan with the GPRA plans	Annually
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Meet with senior management within FE to develop process integration	4QR 05
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## **WORKFORCE PLANNING AND DEPLOYMENT**

To ensure that workforce recruitment and placement, training, and retention at all FE locations are based on mission needs and customer expectations and address any identified skill gaps.

### **GOAL:**

Within three years, FE's goal is to develop, establish, and implement appropriate processes necessary to ensure recruitment, placement, and retention of the skills needed for program accomplishment.

### **CURRENT STATUS:**

FE conducted a top-to-bottom review of the FE program and issued a report making a number of recommendations. The main finding and recommendation of the review was that FE needed to strengthen line-management accountability from the Assistant Secretary through the Headquarters' Deputy Assistant Secretaries to the Field Directors. FE has been operating under a matrix oriented management structure that does not support clear accountability for programs, projects, and budgets. As a result of the recommendation from the top-to-bottom review, FE prepared reorganizations of its Headquarters and Field organizations including the National Energy Technology Laboratory (NETL). These reorganizations have been approved and are being implemented. In changing from a matrix to a line-management structure, FE reviewed organizations to identify excess organizational layers and operations. As part of their continual improvement initiative, annual assessments are planned to look for further opportunities to use staff more efficiently, reduce organizational layers, eliminate duplicative functions, and reduce supervisory positions.

FE is reviewing with the DOE Office of Competitive Sourcing approximately one-third of its Headquarters positions, as well as all of the positions at our Albany Research Center (ARC) and a small number of positions at our other Field locations. These positions are being reviewed to determine their suitability for full study under the Office of Management and Budget (OMB) Circular A-76 guidelines. FE fully supports the A-76 Competitive Sourcing process and performs each year a FAIR ACT inventory of all of our positions. FE has completed its FY 2004 inventory and expects the ASFE to certify that the inventory is accurate and that the coding is consistently applied at all Headquarters and Field locations by the end of June 2004.

As indicated before, the FE strategic human capital management plan is based on the FE missions and budgets as defined in the FE strategic-GRPA plans. Annual reviews are conducted to update our GRPA and strategic human capital management plans based on changes to our FE budgets and mission. The FE strategy is to match our deployment of staff and our inventory of human resource skills to our mission requirements.

To help implement the strategies of our strategic human capital management plan, maximum use is made of new computer technologies and systems. Considerable analysis of employee data is performed using computer technology including skill gap data analysis and retirement eligibility data. FE plans to expand use of FE's intranet system in order to provide an electronic "human resource message board" and to post strategic FE documents for viewing by FE employees.

To further implement our strategic human capital management plan, FE continues to utilize buyouts to help address our skill gap needs in the following ways:

1. target positions for buyout where skills are no longer needed and will not be replaced;
2. target positions that exist where the skills are too narrowly defined; where broader based skills are required;
3. target positions where the function and skill are no longer needed, but the position will be restructured to accommodate new skills.

FE maintains a close working relationship with the DOE Office of Labor Management and the Federal Unions. Organizational changes, employee grievances, meetings with employees, and other management and human resource issues and programs are coordinated with both the DOE Office of Labor Management and the Federal Unions.

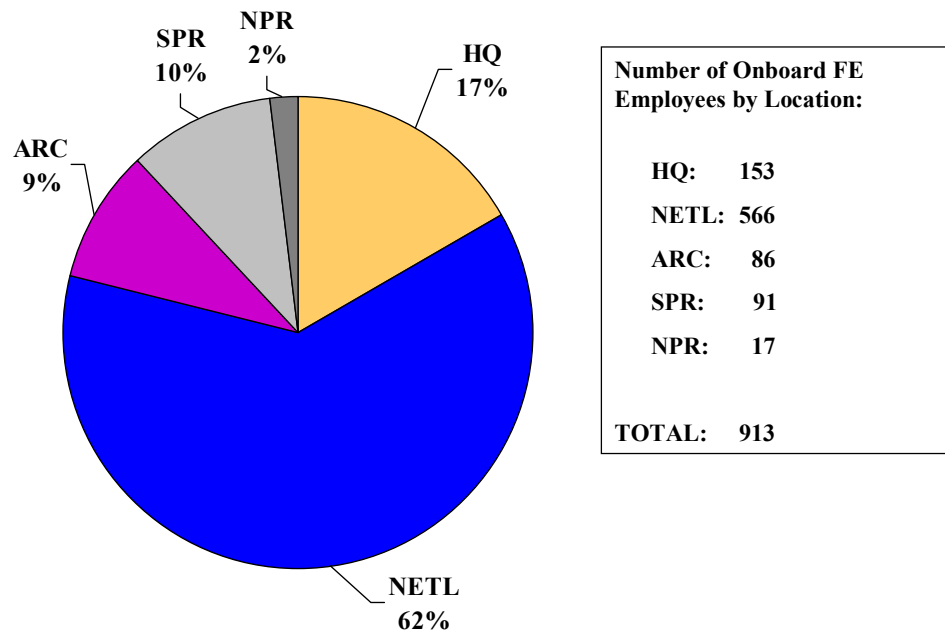
**ACTION PLAN:**

**FISCAL YEAR**

Receive Congressional approval of FE's Headquarters and NETL reorganizations	4 QR 04 (Completed)
Implement Headquarters and NETL reorganizations	1 QR 05
Complete FY 2004 Fair Act inventory	3 QR 04 (Completed)
FE-1 Certification of Fair Act Inventory	3 QR 04 (Completed)
Implement FE Intranet expansion to allow for FE message board and posting of key FE planning and budgetary documents	1 QR 05
Review and update GPRA plans and the Strategic Human Capital Management Plan	Annually
Review organizational layering and duplication of functions to make continual improvements to the	Annually

organization

**Office of Fossil Energy  
Headquarters & Field  
Number of Employees by Site**



06/16/04

**Figure 2: Number of FE Employees by Site**

## **LEADERSHIP AND DIVERSITY**

- 1) Leadership: To guarantee that FE elements plan for continuity of leadership with a cadre of leaders who effectively champion change, ethical behavior, and diversity management.
- 2) Diversity: To ensure that FE employees represent the face of America across all skills and grades.

### **GOAL:**

- 1) Leadership: Within 18 months, FE will develop, establish, and implement a succession plan that includes a review of its current emerging leadership needs.
- 2) Diversity: Within five years, increase underrepresented groups in FE by 90 Full Time Equivalents (FTE).

### **CURRENT STATUS:**

FE has recognized an acute need to provide for continuity of leadership as over 84% of our supervisors and managers are eligible to retire within the next five years (see Figure A-11). Efforts are being made to identify the most critical positions and to use such tools as bridge positions, retention allowances, cross-training, and mentoring programs in order to address our leadership succession issue. In addition, FE is investing in training for our Senior Executive Staff (SES) and other senior managers to sharpen their skills and to develop other staff who will become the replacement managers and leaders of FE as our senior staff start migrating into retirement. FE's challenge to address the continuity of leadership also extends to non-supervisory professional staff. As indicated in Figure A-10, over 50 percent of all FE employees (both managerial and non-managerial) can retire within the next five years. With such a large expected loss of professional staff, FE has embarked on a rapid recruitment program to bring in new, diverse entry-level staff that will help fill the void created by the loss of our senior technical staff. FE is now actively recruiting minority engineers and other technical staff from recent participants in FE's Mickey Leland Energy Fellowship program that supports up to 50 summer interns each year from Historically Black Colleges, Hispanic Serving Institutions, and Tribal Colleges and Universities. Recently, we were able to hire two new employees who participated in this program. FE has also developed and is implementing an innovative pilot Technical Career Intern Program with Penn State University and the Colorado School of Mines. This program will partially support highly qualified engineering students in their junior and senior years of college with their commitment to join the FE staff at one of our Headquarters or Field location for a five year period after graduation.

With an active recruitment program that includes the strategies identified above, FE expects to fulfill their vision of having the right staff available at the right time in the right place.

**ACTION PLAN:****FISCAL YEAR**

Hire at least 10 new minority technical staff members	4 QR 05
Renew agreement with Department of Agriculture regarding providing an SES Forum	1 QR 05
Welcome and train the first students from the pilot FE Technical Career Intern Program	3 QR 04 (Work in progress)
Conduct the Mickey Leland Energy Fellowship Program for minority students and actively recruit their employment by FE upon their college graduation	4 QR 04 (2 selections of MLEF students completed)
Develop continuous learning program for FE	2 QR 05
Host the FY 2004 DOE Human Resource, EEO and Diversity Symposium	3 QR 04 (Completed)
Issue policy regarding continuing management training for new and seasoned managers	1 QR 05
Perform assessment of FE's workforce diversity as it relates to the local civilian workforce	Annually
Minority mentoring	Annually

## **KNOWLEDGE MANAGEMENT**

A systematic approach to identify, document, organize, distribute, and institutionalize FE's mission critical knowledge.

### **GOAL:**

Within three years, FE will have a knowledge management system in place to address the loss of institutional knowledge that will occur as the aging workforce begins to retire.

### **CURRENT STATUS:**

FE is in the process of developing a formal knowledge management program to facilitate the storage and sharing of historical data within the organization. FE has a representative on the DOE Corporate Knowledge Management Working Group (KMWG) and is currently participating in the monthly meetings. The FE representative continues to work with the KMWG on the policy statement review and identification of projects in DOE where knowledge management (KM) methods can be applied. In conjunction with the working group, FE is promoting the use of KM in an effort to identify skills and information that needs to be retained as well as evaluating what tools could be used to capture corporate knowledge. FE expects to fully involve our information technology staff to use as many automated tools as practical. In addition, FE is developing performance based training manuals as a method of retaining historical data. Initial efforts have been in the petroleum draw-down process associated with our Strategic Petroleum Reserves. Key staff are selected to perform draw-down activities during which training documentation is developed. Training documentation is developed for each major step of the draw-down process. If this process is successful, it will be extrapolated to other areas within the FE program.

### **ACTION PLAN:**

### **FISCAL YEAR**

Implement the pilot knowledge management training program by documenting the petroleum draw-down process

4 QR 04

Inventory critical knowledge management functional areas to be documented

1 QR 05

Develop an FE-wide knowledge management program

2 QR 05

Communicate KM programs and initiatives to FE employees

1 QR 05

Complete implementation of FE knowledge



management system

4 QR 05

Perform assessment of KM programs to seek new opportunities to expand KM initiatives

Annually

## **PERFORMANCE CULTURE**

FE requires a high-performance culture that is results-oriented, client- and customer-focused, and collaborative behavior by all of its members. FE wishes to be a high-performing organization that allows people, processes, and technology to contribute to mission accomplishment while providing both accountability and fairness for all employees. FE's performance management system must be aligned with the agency's mission and must provide for personal accountability for performance by reinforcing both rewards and consequences.

### **GOAL:**

Within three years, develop and implement a performance management system to foster a results-oriented culture by accountability of employees thus reinforcing the important role that all FE employees play in assuring that FE effectively and efficiently carry out its critical missions.

### **CURRENT STATUS:**

FE has incorporated into their human resource strategies, the concept of tying performance standards to FE strategic documents including the FE strategic-GPRA plans, the FE annual budgets, and the FE program plans. Employees are provided a copy of the key FE GRPA plans, budgets, and the strategic human capital plan via postings on the FE intranet sites. In the 3 QR FY 04, FE surveyed all employee standards to ensure that at least 60 percent of FE employees had, at a minimum, one element in their performance plan that was directly linked to fulfilling one of the Department's missions/goals. At the present time, over 85 percent of all FE employees had at least one performance element in place that was directly linked to the success of FE and DOE missions. Performance plans are reviewed annually and are adjusted for changing missions and budgets.

In 2 QR FY03, FE incorporated SES performance measures into all GS-15 supervisory performance appraisals. FE expects to cascade these requirements to lower level employees by the 4QR FY05.

FE annually conducts reviews of performance standards of SES and non-SES staff to assure clear, explicit, and measurable performance measures is in place.

FE has begun a review of our award policies in order to develop new strategies to provide higher monetary and other innovative awards for high performing staff. FE also continues to encourage the use of expanded award options including formal recognition at staff meetings, use of time off awards and other creative forms of awards.

Staff who under perform are offered targeted training courses to help them raise their performance and, if required, are put on performance improvement plans.

**ACTION PLAN:****FISCAL YEAR**

Cascade down to all non-managerial staff, SES, and managerial performance measures

3 QR 05

Review of award policies to increase awards for high performing employees

1 QR 05

Post FE award policies on the FE intranet site

1 QR 05

Review of performance standards and their relationship to key FE strategic plans and objectives

Annually

Conduct mid-year performance reviews with employees to assess performance and review individual development and training plans

Annually

## **TALENT**

FE must identify mission-critical occupations and competencies needs in the current and future workforce, and develop strategies to identify, recruit, and retain a high performing workforce.

### **GOAL:**

Within three years, development and implement a corporate approach which uses programs to recruit, hire, develop, and retain employees with the skills for mission accomplishment.

### **CURRENT STATUS:**

In FY 04, FE completed an initial skills gap analysis in order to determine what new skills would be needed through 2010. Based on the identified skills gaps, new recruitment strategies are in the process of being developed and will be implemented as attrition occurs. The recruitment strategies will take into consideration not only the identified skill gaps and the changing FE mission and budgets, but also the projected loss of key management and technical staff. A list of the key skill gaps based on projected loss of critical skills due to our aging workforce, as well as critical skills that will be needed to address new or changing missions and programs, is presented in Attachment 1. These critical skills that will be needed between now and 2010 are forming the basis of our recruitment plans and workforce strategies and include personnel with such skills as Chemical, Electrical, and Mechanical Engineering, technical skills associated with earth science and computer skills, particularly associated with computer modeling.

FE completed an analysis of all retirement-eligible employees and other employee demographic information (see Figures and Tables). In addition, an analysis was done of retirement eligibility of our leadership staff. Human resource strategies are being developed to address the expected loss of a large number of our FE staff, managers, and supervisors. FE has been reviewing their recruitment strategies in order to assure that the needed human capital skills will be available to replace our large number of employees who are expected to migrate into retirement in the near future. To assure that FE will be bringing in new junior level staff who can become the replacements for our departing senior staff, FE established and implemented a policy that every second technical vacancy would need to be filled by entry-level staff at a grade level no higher than a GS-12. In addition, FE is developing tailored training programs to help cross-train technical staff and potential supervisors to address skill gap areas where appropriate. In addition, as part of FE's mid-year performance reviews with their employees, individual development plans (IDP) are developed or reviewed to ensure that all employees have up to date skills necessary to meet current and future mission requirements.

FE is working to ensure that project managers and engineers are fully certified. A review of the training needed and required for each employee has been determined and these

employees are in the process of gaining the experience and training necessary for their certification. In addition, FE conducts mid-year performance reviews with their employees. During these reviews, IDPs are developed or reviewed to ensure that all employees have up to date skills necessary to meet current and future mission requirements.

<b><u>ACTION PLAN:</u></b>	<b><u>FISCAL YEAR</u></b>
Review all employee files and qualifications to make certain all credentials, especially academic degrees information, is accurate and awarded from accredited colleges and universities	2 QR 05
Recruitment strategy for FY 04-05 <ul style="list-style-type: none"> <li>• Attend at least 8 career fairs</li> <li>• Actively recruit minority college engineering graduates who participated in the FE Mickey Leland Energy Fellowship</li> <li>• Recruit at least 10 minority staff members</li> <li>• Initiate pilot FE Technical Career Intern Program with Pennsylvania State University</li> <li>• Follow up on FE policy of hiring 1 entry-level staff person for every two vacancies</li> <li>• Utilize greater use of technical recruitment advertisements</li> <li>• Actively recruit minority technical staff who have participated in the Minority Mentoring and Internship Program (MMIP)</li> </ul>	FY 04-05
Develop tailored training programs to partly address skill gaps	2 QR 05
Update skill gap analysis	Annually
Conduct mid-year performance reviews with employees to assess performance and review individual development and training plans	Annually
<ul style="list-style-type: none"> <li>• FE has provided over 441 employees training in Program Management and Contract Management. Courses completed to date include:</li> </ul>	

- Source Selection Training; PMCDP; COR Training; Performance Based Contracting; Quantitative Risk Assessment; Federal Contracting with Small Business; Intro to Federal Contracting; Performance Based Budgeting; Project Assessment & Reporting System Workshop; Federal Funds Management; PMP Bootcamp; COR Refresher; Licensing Software to the U.S. Government; Program Management Overview. COMPLETED 4QFY04.

## SKILL GAPS THROUGH THE YEAR 2010

### NEW POSITIONS/SKILLS NEEDED BY 2010

The following represents the skills of existing staff who are expected to retire between now and 2010 and those new skills that may be needed as a result of expected new programs or missions:

<u>Location</u>	<u>Grade</u>	<u>Series</u>	<u>Series Name</u>
ARC	12/13	893	Chemical Engineer
ARC	12/13	806	Materials Research Eng.
ARC	12/13	1321	Metallurgist
ARC	12/13	810/830	Civil/Mechanical Eng.
HQ	11	340	Program Analyst
HQ	13/14	340	Program Analyst
HQ	15	340	Program Analyst
HQ	14	801 or 1301	General Engineer or Physical Scientist
HQ	14	801 or 1301	General Engineer or Physical Scientist
HQ	14	801	General Engineer
HQ	15	801	General Engineer
HQ	14/15	801 or 1301	General Engineer or Physical Scientist
HQ	15	801 or 1301	General Engineer or Physical Scientist
HQ	EJ	801	General Engineer
HQ	SES	801 or 1301	General Engineer or Physical Scientist
HQ	ES	801	General Engineer
HQ	9/12	343	Program Analyst
HQ	8	344	Program Assistant
HQ	9/15	801	General Engineer
HQ	9/15	801	General Engineer
HQ	9/15	801	General Engineer
HQ	9/14	344	Program Analyst
HQ	9/14	028	Environmental Protection Specialist
HQ	9/15	801	General Engineer

## SKILL GAPS THROUGH THE YEAR 2010

(Continued)

<u>Location</u>	<u>Grade</u>	<u>Series</u>	<u>Series Name</u>
HQ	9/15	801	General Engineer
HQ	9/15	801	General Engineer
HQ	9/15	801	General Engineer
HQ	9/15	801	General Engineer
HQ	ST	801	General Engineer
HQ	7	344	Program Analyst
HQ	SES	1301	Physical Scientist
HQ	15	801	General Engineer
HQ	15	801	General Engineer
HQ	15	801	General Engineer
HQ	15	110	Economist
HQ	15	1301	Physical Scientist
HQ	14/15	801 or 1301	General Engineer or Physical Scientist
HQ	SES	340	Program Analyst
HQ	3/4	301	Secretary
HQ	8	303	Program Assistant
HQ	9	343	Program Analyst
HQ	15	801	General Engineer
HQ	14	801	General Engineer
HQ	15	801	General Engineer
HQ	11	801	General Engineer
HQ	9/13	343	Program Analyst
HQ	11/13	819	Environmental Engineer
HQ	11/13	881	Petroleum Engineer
HQ	11	301	General Engineer
HQ	15	850	Electrical Engineer
HQ	14	110	Economist
HQ	14	028	Environmental Protection Specialist
HQ	12/13	1150	Physical Scientist
HQ	14/15	1150	Physical Scientist
HQ	12/13	881	Petroleum Engineer
HQ	12/13	1102	Natural Gas Analyst
HQ	12/13	1102	Natural Gas Analyst
HQ	14/15	110	Economist
HQ	6/7	301	Administrative Assistant

## SKILL GAPS THROUGH THE YEAR 2010



(Continued)

<u>Location</u>	<u>Grade</u>	<u>Series</u>	<u>Series Name</u>
NETL	EJ	801 or 1301	General Engineer or Physical Scientist
NETL	12/13	830 or 893	Mechanical Engineer or Chemical Engineer
NETL	12/13	1320 or 1301	Chemist or Physical Scientist
NETL	12/13	855 or 1310	Electrical Engineer or Physicist
NETL	12/13	1301 or 881	Geoscientist or Petroleum Engineer
NETL	12/13	830 or 893	Mechanical Engineer or Chemical Engineer or Physicist
NETL	9/13	1310 893 or 830	Chemical Engineer or Mechanical Engineer
NETL	12/13	110	Economist
NETL	9/13	1520 or 1529	Math/Statistician
NETL	9/13	1350 or 881	Geologist or Petroleum Engineer
NETL	9/13	1350 or 881	Geologist or Petroleum Engineer
NETL	9/13	801 or 1301	General Engineer or Physical Scientist
NETL	9/13	801 or 1301	General Engineer or Physical Scientist
NETL	9/13	801 or 1301	General Engineer or Physical Scientist
NETL	9/13	881 or 893	Petroleum Engineer or Chemical Engineer
NETL	9/13	1350 or 881	Geologist or Petroleum Engineer
NETL	9/13	110 or 881	Economist or Petroleum Engineer
NETL	9/13	1515 or 801	Mathematician or Engineer or Physical Scientist
NETL	7/13	850	Electrical Engineer
NETL	7/13	830	Mechanical Engineer
NETL	7/13	893	Chemical Engineer
NETL	7/13	881 or 880	Petroleum Engineer or Mining Engineer or Geologist
NETL	7/13	1350	General Engineer
NETL	9/13	801	General Engineer
NETL	9/13	1101	Business Management Specialist
NETL	9/13	301 or 1301	Energy Management Specialist/ Energy Security Specialist or Materials Scientist

## SKILL GAPS THROUGH THE YEAR 2010

(Continued)

<u>Location</u>	<u>Grade</u>	<u>Series</u>	<u>Series Name</u>
SPR	7	203	Human Resource Specialist
SPR	13	801	General Engineer
SPR	13	819	Environmental Engineer

## SKILL GAPS THROUGH THE YEAR 2010

(Continued)

### CURRENT POSITIONS/SKILLS THAT ARE OR WILL BECOME EXCESS BY 2010

The following represents the skills of existing staff that are not expected to be needed by the year 2010:

<u>Location</u>	<u>Grade</u>	<u>Series</u>	<u>Series Name</u>
ARC	14	1320	Research Chemist
ARC	13	1320	Research Chemist
ARC	13	343	Management Analyst
ARC	10	4749	Maintenance Mechanic
ARC	9	4749	Maintenance Mechanic
ARC	11	802	Engineering Technician
ARC	15	1301	Physical Scientist
HQ	14	801	General Engineer
HQ	14	028	Environmental Protection Specialist
HQ	14	1301	Physical Scientist
HQ	15	801	General Engineer
HQ	15	850	Electrical Engineer
HQ	14	1101	Natural Gas Analyst
HQ	14	1101	Natural Gas Analyst
HQ	12	1101	Natural Gas Analyst
HQ	7	344	Program Assistant
HQ	9	1101	Natural Gas Analyst
HQ	15	1301	Environmental Engineer
HQ	14	801	General Engineer
HQ	15	801	Lead General Engineer
HQ	8	344	Program Assistant
HQ	15	301	General Engineer
HQ	15	1301	Physical Scientist
HQ	12	343	Program Analyst
HQ	14	343	Program Analyst
HQ	15	801	Lead General Engineer
HQ	15	819	Environmental Engineer
HQ	15	881	Petroleum Engineer
SPR	7	318	Secretary

### SKILL GAPS THROUGH THE YEAR 2010

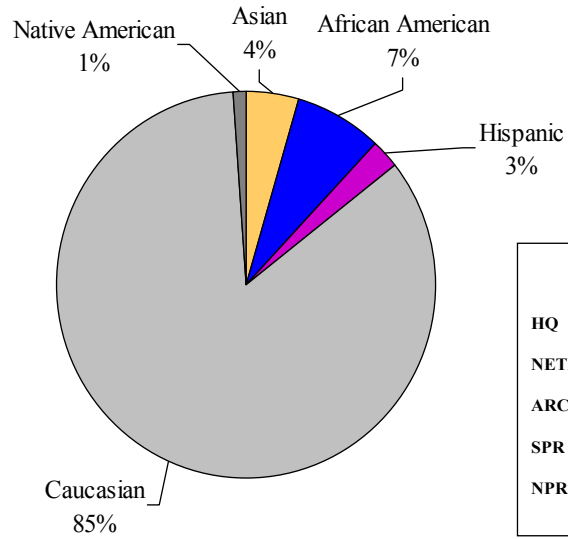
(Continued)

<u>Location</u>	<u>Grade</u>	<u>Series</u>	<u>Series Name</u>
SPR	9	201	Human Resource Specialist
SPR	11	343	Program Analyst
SPR	11	510	Accountant
SPR	6	318	Secretary
SPR	13	801	General Engineer
SPR	13	1601	Site Operations Specialist
SPR	6	318	Secretary
SPR	11	343	Program Analyst
SPR	13	801	Civil Engineer
SPR	13	801	Mechanical Engineer
SPR	13	028	Environmental Protection Specialist
SPR	13	1910	Quality Assurance Specialist
SPR	6	318	Secretary

**APPENDIX A:**  
**TABLES**  
**AND**  
**CHARTS**

<b>Chart/Figure No.</b>	<b>Title</b>
A-1	FE Ethnic Employee Diversity
A-2	FE Minority Groups Compared to CLF
A-3	Number and Percentage of FE Employees by Gender
A-4	FE Employee Gender by Grade
A-5	Percentage of FE Employees by Gender and Grade (By Site)
A-6	Age Percentage of FE Employees by Site
A-7	FE Grade Distribution by Site
A-8	Percentage of FE Supervisors and Non-Supervisors by Site
A-9	FE Retirement Eligible Employees by Calendar Year
A-10 Year	Percentage of FE Retirement Eligible Employees by Calendar
A-11	Retirement Eligible FE Managers & Supervisors by Calendar Year
A-12	Percentage of FE Retirement Eligible Managers & Supervisors by Calendar Year (by Site)
A-13	FE Employee Education Levels
A-14	FE Occupational Groups
A-15	Educational Levels by Occupational Groups
A-16	Gender Distribution by Occupational Group

## Office of Fossil Energy Headquarters & Field Employee Diversity



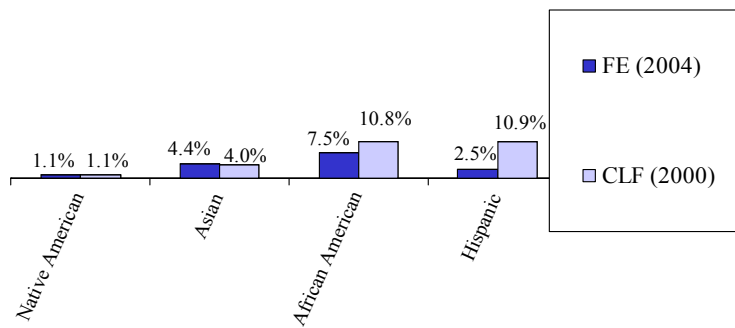
	<u>Asian</u>	<u>Hispanic</u>	<u>Caucasian</u>	<u>African American</u>	<u>Native American</u>
<b>HQ</b>	2%	4%	76%	18%	0%
<b>NETL</b>	5%	2%	88%	4%	1%
<b>ARC</b>	4%	0%	92%	1%	3%
<b>SPR</b>	2%	8%	70%	17%	3%
<b>NPR</b>	0%	0%	19%	0%	0%

06/14/04

### A-1: FE Ethnic Employee Diversity

**Office of Fossil Energy  
Headquarters & Field  
Minority Ethnic Groups Compared to  
Civilian Labor Force (CLF)**

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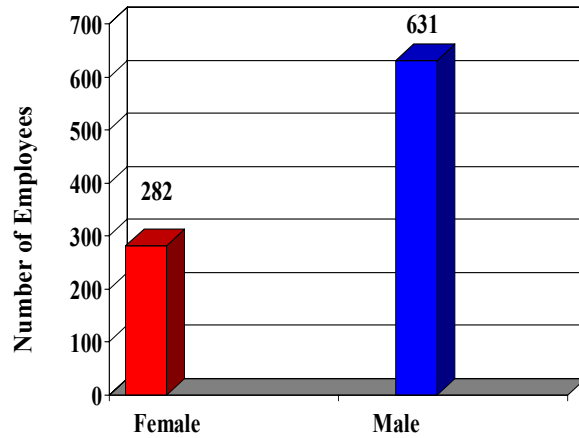


06/14/04

**A-2: FE Minority Groups Compared to CLF**



**Office of Fossil Energy  
Headquarters and Field  
Number and Percentage of Employees by  
Gender**

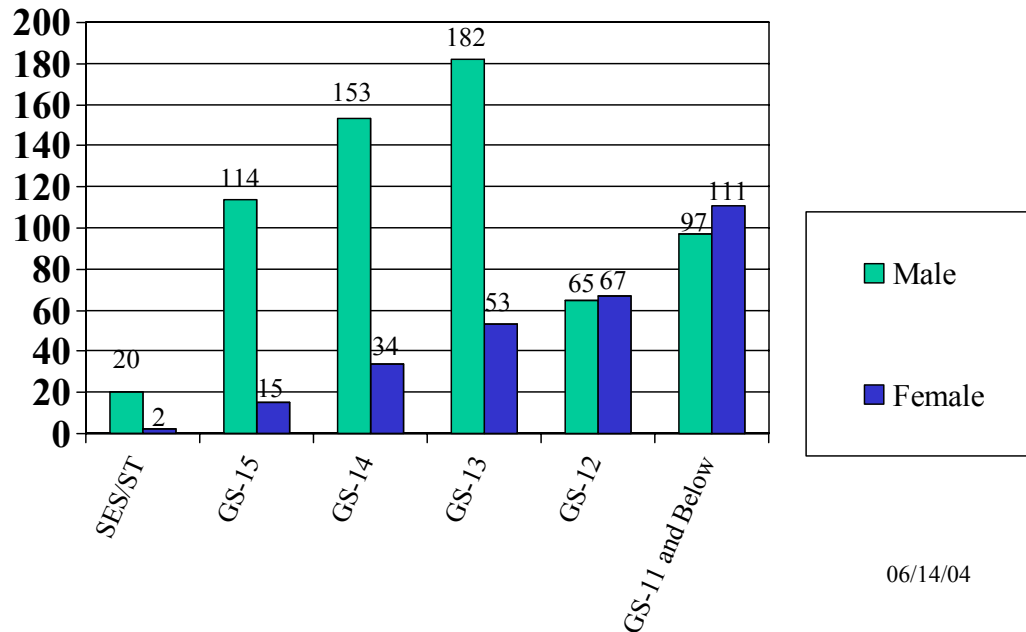


	<u>Male</u>	<u>Female</u>
HQ	59%	41%
ARC	71%	29%
NETL	77%	13%
SPR	60%	40%
NPR	56%	44%

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**A-3: Number and Percentage of FE Employee by Gender**

## Office of Fossil Energy Headquarters and Field Gender by Grade



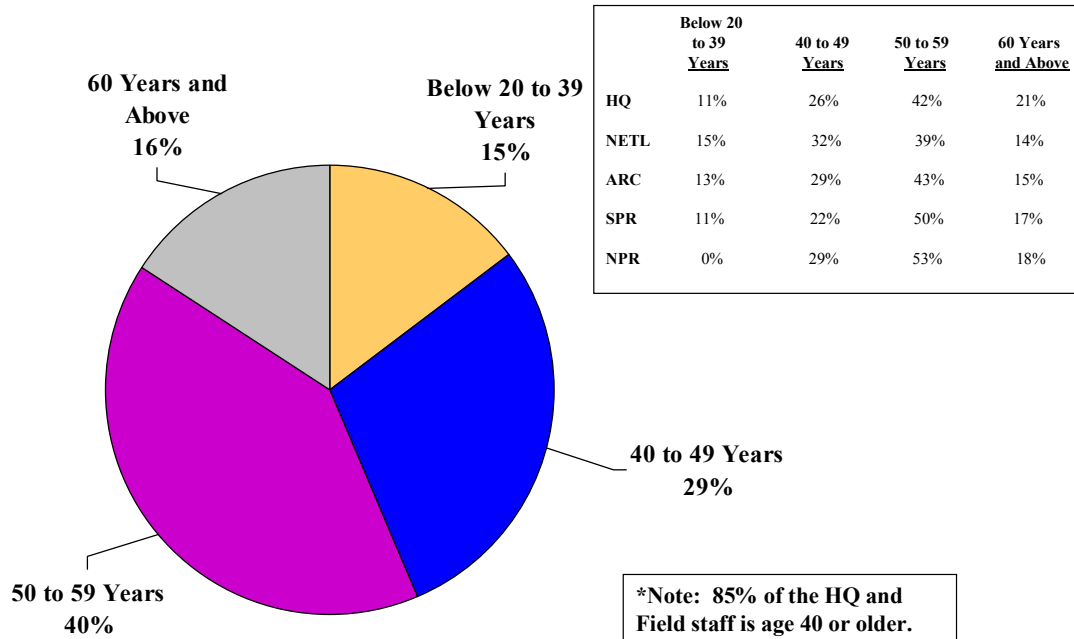
A-4: FE Employee Gender by Grade

OFFICE OF FOSSIL ENERGY  
HEADQUARTERS & FIELD  
PERCENTAGE OF EMPLOYEES BY GENDER AND GRADE  
BY SITE - 6/16/04

	SES		15		14		13		12		11 & Below	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
HQ	9%	1%	22%	5%	21%	8%	2%	8%	1%	4%	3%	16%
ARC	1%	0%	5%	1%	13%	0%	23%	5%	7%	1%	36%	8%
NETL	1%	1%	12%	1%	16%	4%	22%	6%	9%	8%	10%	10%
SPR	1%	0%	8%	0%	20%	2%	24%	7%	5%	11%	2%	20%
NPR	0%	0%	12%	0%	18%	6%	34%	0%	6%	18%	0%	6%

**A-5: Percentage of FE Employees by Gender and Grade (By Site)**

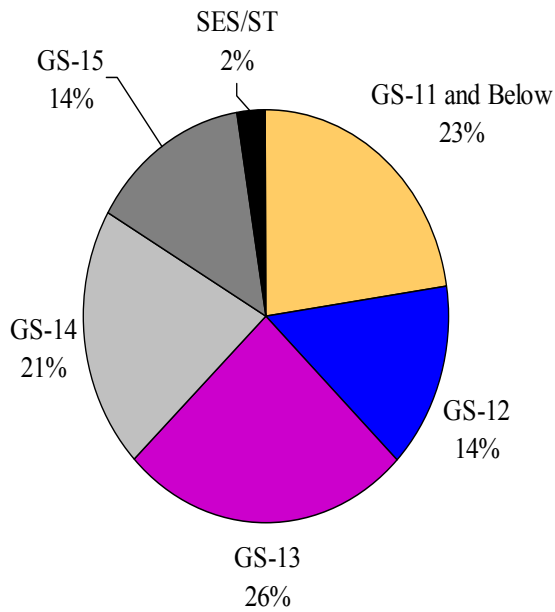
## Office of Fossil Energy Headquarters & Field Age of Employees



06/14/04

**A-6: Age Percentage of FE Employees by Site**

## Office of Fossil Energy Headquarters and Field Grade Distribution

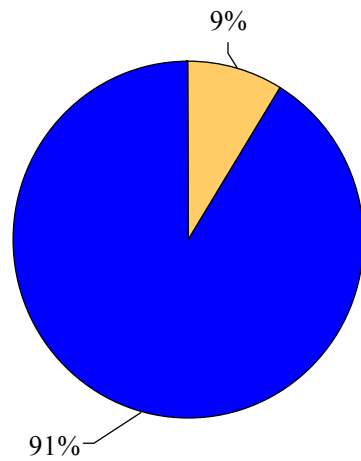


	<u>SES</u>	<u>Grade 15</u>	<u>Grade 14</u>	<u>Grade 13</u>	<u>Grade 12</u>	<u>Grade 11 &amp; Below</u>
HQ	9%	28%	30%	9%	5%	19%
ARC	1%	6%	13%	28%	8%	44%
NETL	1%	13%	19%	29%	17%	21%
SPR	1%	8%	22%	31%	16%	22%
NPR	0%	12%	24%	34%	24%	6%

06/16/04

### A-7: FE Grade Distribution by Site

**Office of Fossil Energy  
Headquarters & Field  
Percentage of Supervisors and Non-Supervisors**



■ Supervisors

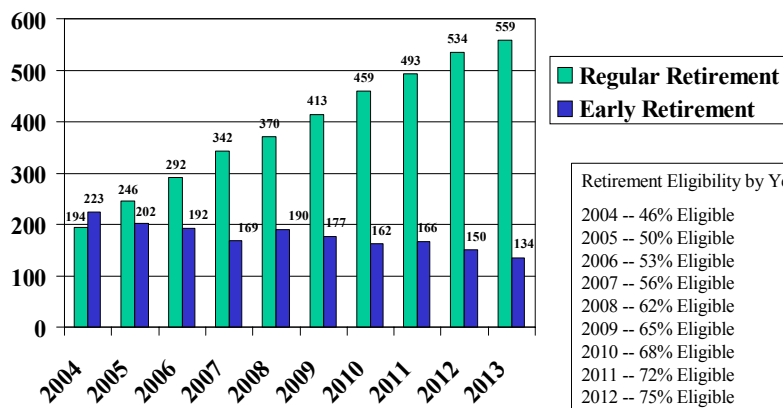
■ Non-Supervisors

	<u>Supervisor</u>	<u>Non-Supervisor</u>
HQ	12%	88%
NETL	6%	94%
ARC	7%	93%
SPR	14%	86%
NPR	21%	79%

06/16/04

**A-8: Percentage of FE Supervisors and Non-Supervisors by Site**

**Office of Fossil Energy  
Headquarters & Field  
Retirement Eligible Employees**  
Number of Employees Eligible for Retirement  
by Calendar Year



Retirement Eligibility by Year:

2004 -- 46% Eligible  
2005 -- 50% Eligible  
2006 -- 53% Eligible  
2007 -- 56% Eligible  
2008 -- 62% Eligible  
2009 -- 65% Eligible  
2010 -- 68% Eligible  
2011 -- 72% Eligible  
2012 -- 75% Eligible  
2013 -- 76% Eligible

6/14/2004

**A-9: FE  
Retirement  
Eligible  
Employees by  
Calendar Year**

**OFFICE OF FOSSIL ENERGY  
HEADQUARTERS & FIELD  
PERCENTAGE OF RETIREMENT ELIGIBLE EMPLOYEES  
BY SITE - 6/16/04**

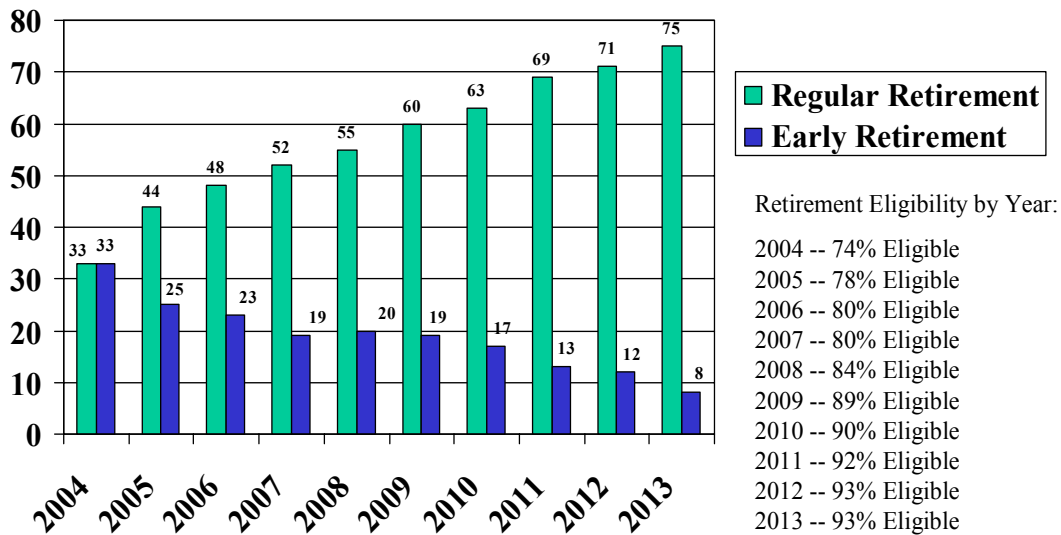
CY	HQ		NETL		ARC		SPR		NPR	
	Reg	Early	Reg	Early	Reg	Early	Reg	Early	Reg	Early
2004	30%	24%	18%	19%	15%	27%	17%	34%	26%	21%
2005	36%	22%	22%	18%	22%	22%	25%	31%	37%	16%
2006	41%	20%	26%	18%	26%	19%	31%	29%	37%	21%
2007	44%	19%	32%	15%	29%	19%	36%	27%	42%	16%
2008	48%	20%	34%	18%	34%	16%	40%	27%	42%	21%
2009	52%	23%	38%	18%	39%	15%	50%	20%	47%	16%

2010	57%	14%	42%	18%	45%	13%	55%	16%	58%	5%
2011	61%	12%	45%	19%	49%	13%	57%	16%	68%	0%
2012	66%	9%	49%	18%	55%	11%	63%	12%	68%	0%
2013	68%	9%	52%	16%	56%	10%	64%	12%	68%	0%

**A-10: Percentage of FE Retirement Eligible Employees by Calendar Year (by Site)**



**Office of Fossil Energy  
Headquarters & Field  
Retirement Eligible  
Managers & Supervisors**  
Number of Managers and Supervisors Eligible for Retirement  
by Calendar Year



6/16/2004

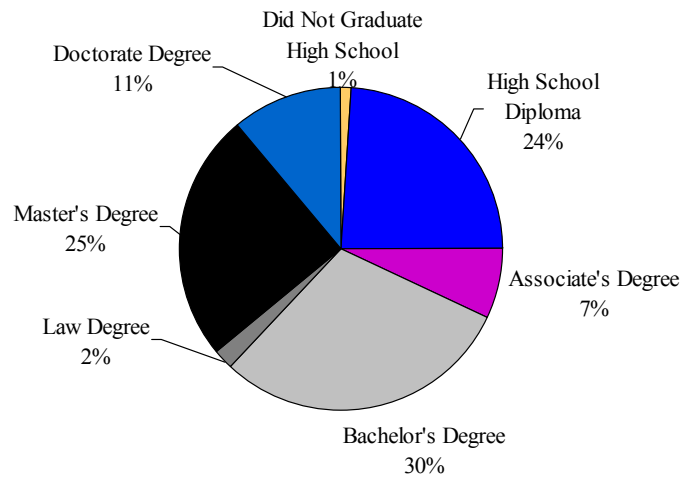
**A-11: Retirement Eligible FE Managers & Supervisors by Calendar Year**

**OFFICE OF FOSSIL ENERGY**  
**HEADQUARTERS & FIELD**  
**PERCENTAGE OF RETIREMENT ELIGIBLE**  
**MANAGERS & SUPERVISORS**  
**BY SITE - 6/16/04**

CY	HQ		NETL		ARC		SPR		NPR	
	Req	Early	Req	Early	Req	Early	Req	Early	Req	Early
2004	44%	41%	37%	31%	29%	43%	36%	43%	17%	33%
2005	52%	33%	46%	29%	43%	29%	57%	21%	50%	17%
2006	59%	26%	51%	23%	43%	29%	57%	29%	50%	33%
2007	63%	22%	57%	17%	43%	29%	64%	21%	50%	33%
2008	67%	19%	57%	26%	57%	14%	71%	21%	50%	33%
2009	67%	19%	66%	26%	57%	29%	79%	14%	50%	33%
2010	70%	15%	69%	26%	57%	29%	79%	14%	50%	33%
2011	89%	0%	71%	26%	57%	29%	79%	14%	83%	17%
2012	89%	0%	71%	26%	71%	29%	86%	7%	83%	17%
2013	89%	0%	83%	14%	71%	29%	93%	0%	83%	17%

**A-12: Percentage of FE Retirement Eligible Managers & Supervisors**  
**by Calendar Year (by Site)**

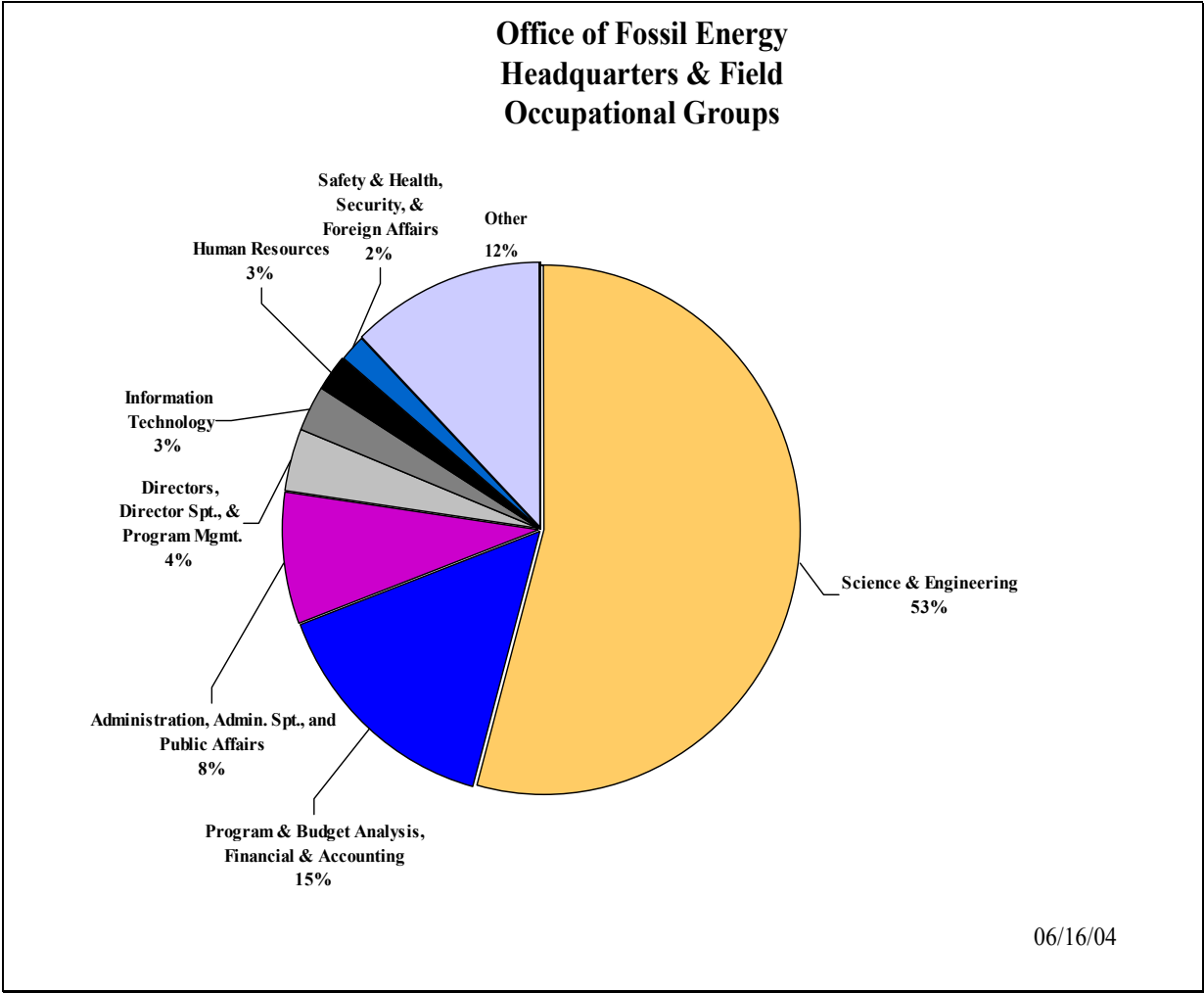
**Office of Fossil Energy  
Headquarters & Field  
Employee Education Levels**



Did not earn a college level (Bachelor's or higher) degree: 32%  
Received College Level Degree: 68%  
Received Advanced Degree: 38%

06/16/04

**A-13: FE Employee Education Levels**



**A-14: FE Occupational Groups**

Occupational Group	Percentage of Occupational Group That Are	Percentage of Occupational Group That Are	Percentage of Occupational Group That Are	Percentage of Occupational Group That Are
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	<b>Shown to Have a Doctorate</b>	<b>Shown to Have a Master's Degree</b>	<b>Shown to Have Bachelors Degree</b>	<b>Shown to Have a Degree</b>
Science & Engineering	11%	28%	56%	95%
Program & Budget Analysis, Financial & Accounting	2%	26%	59%	87%
Administration, Admin. Spt., and Public Affairs	1%	21%	35%	57%
Directors, Director Spt., & Program Mgmt.	12%	22%	58%	92%
Information Technology	1%	28%	45%	74%
Human Resources	0%	15%	38%	53%
Safety & Health, Security, & Foreign Affairs	11%	51%	31%	93%
Other	10%	13%	48%	71%

#### **A-15: Educational Levels by Occupational Groups**

<b>Occupational Group</b>	<b>Percentage of Occupational Group</b>	<b>Percentage of Occupational Group</b>
---------------------------	---	---

	<b>Represented by Females</b>	<b>Respresented by Males</b>
Science & Engineering	24%	76%
Program & Budget Analysis, Financial & Accounting	62%	38%
Administration, Admin. Spt., and Public Affairs	73%	27%
Directors, Director Spt., & Program Mgmt.	26%	74%
Information Technology	24%	76%
Human Resources	64%	36%
Safety & Health, Security, & Foreign Affairs	27%	73%
Other	38%	62%

**A-16: Gender Distribution by Occupational Group**